City of Broomfield
ONE DESCOMBES DRIVE BROOMFIELD, CO 80020 (303) 469-3301

December 14, 2000

Dyan Foss
Kaiser-Hill, L L C
Rocky Flats Environmental Technology Site
10808 Highway 93, B130,
Golden, CO 80403-8200

Re 771 Closure Project Decommissioning Operations Plan Modification 3 and Proposed Action Memorandum for Under Building Contamination Remediation

Dear Ms Foss

The City of Broomfield appreciates the opportunity to review and comment on the 771 Closure Project Decommissioning Operations Plan (DOP) Modification 3 and Proposed Action Memorandum (PAM) for Under Building Contamination (UBC) Remediation dated October 31, 2000 Broomfield wants to ensure the 771 DOP is a job-specific plan that addresses the detail of decommissioning operations that will protect human health and the environment both on- and off-site The City staff has very thoughtfully and thoroughly reviewed this crucial document and has specific concerns associated with the document Broomfield has addressed similar concerns with other previous Decommissioning and Demolition (D&D) documents which still have not been addressed

The City of Broomfield is extremely concerned with the planned use of explosives for any D&D activity City staff has been vocal with their concerns and commented on other D&D documents about the use of explosives and the potential for their "routine use" The City commends Kaiser-Hill for the additional detail regarding the use of explosives within the 771 DOP, but City staff has not received sufficient information on the methodology to make an informed decision Broomfield recognizes explosives are used routinely in the demolition industry, but the potential to release radioactive or chemical airborne particulates is not part of a routine demolition activity The City of Broomfield cannot support the use of explosives at this time Additional information needs to be provided regarding (1) the situation is which explosives will be used, (2) reasoning why explosives should be used instead of other demolition methods, (3) decision that the use of explosives will only be on "free-release" facilities, (4) use of explosives at other DOE Sites on facilities which were contaminated with plutonium or americium, and (5) methodologies to be used to prevent the release and control of airborne contamination and fugitive dust Without this additional information, Broomfield will object strongly to any use of explosives

The City does not agree with the exception to the RSOP for Recycling Concrete, which will eliminate the need to stockpile and size reduce the concrete The proposed change does not clearly identify the size of the rubble, compaction and method used to compact soils around the large pieces of concrete, how subsidence issues are addressed, potential water pathways, and how the new characteristics would lend themselves to meet the requirements for ultimate subsidence for backfilled areas of less than one percent Broomfield requests more detailed information on the exception to the RSOP so we may forward the information to our Engineers for review and comment

Broomfield is concerned with the proposed actions and generic detail related to the removal of UBC and the placement of soils below Tier 1 action levels back into the excavation area The City assumes §268 49 Alternative Land Disposal Restrictions (LDR) treatment standards for contaminated soil will be used as a determining factor for placement of any RCRA regulated waste The process for the waste determination and characterization of UBC must be identified within the 771 DOP Potential expected contaminants of concern (COCs) and clean-up target levels are identified in Table 5 of the document, but Freon is not identified as a COC The project approach needs to be more clearly identified Placement of soils with volatile organics back into excavation areas which may impact groundwater and/or surface water is a subject requiring more dialogue with stakeholders

The City of Broomfield requests enhanced air monitoring be performed during demolition of facilities to ensure there are no elevated releases of contaminants to the environment Broomfield has voiced its' concern with this matter and has had the same concern with previous D&D documents In addition, Broomfield is concerned with the potential for release of emissions of radionuclides to the environment during the removal of contaminated portions of a structure Removal of contaminated portions of a structure is not even addressed within the 771 DOP and this activity is crucial for free-releasing a facility so the Facility Demolition RSOP can be utilized In addition, the City is concerned that scabbled concrete that has been free-released may still contain contamination that my leach out or be released during demolition activities Broomfield requests enhanced air monitoring be performed during demolition of facilities and during the removal of contaminated sections of a facility

Broomfield continues to be concerned with the work planning and execution of protecting surface water from contaminated groundwater within the area There is a potential to encounter contaminated groundwater within this area The 771 DOP is not specific enough to address the potential degradation of surface water The "Surface Water Management Practices" section is generic to the site and not explicit to the 771 project The specific constituents of concern and groundwater plumes are known and should be addressed within the plan

The City is adamant Table 5 (Outbuilding Disposition Summary) and Table 6 (Predemolition Summary) should be placed back into the document These tables are valuable and provide end state information regarding the 771 project Broomfield has also requested these two tables be placed within the 707 DOP Justification for the removal of these tables should be forwarded to the stakeholders

Environmental consequences for the D&D activities have been referred to in other documents such as the RSOP for Facility Component Removal, Size Reduction, and Decontamination and the RSOP for Facility Disposition These documents do not address the environmental consequences of long-term stewardship The 771 DOP only addresses National Environmental Policy Act (NEPA) environmental impact analysis for UBC and does not address impact such as leaving the tunnels in place, water quality, and human health and safety Broomfield requests the 771 DOP include NEPA impacts specific to the 771 project
The incinerator is not mentioned in the 771 DOP, yet is an important and unique section of the facility requiring RCRA-closure, demolition, and disposition Broomfield strongly feels more details referring to the activities associated with incinerator should be indicated in the DOP to identify the project approach for the unit's decommissioning and disposition Add the incinerator removal description to section 4 7 "Facility Demolition"

Finally, Broomfield would like to commend Kaiser-Hill on the specific methodologies and plans for mobilization, site preparation, and demobilization for the 771 project Similar plans should be incorporated into all the other DOP documents

In addition to these general comments, comments for specific sections of the 771 DOP are provided in the attachment

Thank you for the opportunity to comment on this crucial document The City of Broomfield expects that we will continue to be involved, informed, and allowed to participate in the revisions to the 771 DOP If you have any questions, please feel free to call Shirley Garcia at 303-438-6329 or me at 303-438-6363

Sincerely,

SR Garcia

Shirley Garcia
Environmental Services Coordinator

Attachment

Pc Hank Stovall, Broomfield City Council
Mike Bartleson, City of Broomfield
Kathy Schnoor, City of Broomfield
Jeff Stevens, Kaiser-Hill Company
Steve Gunderson, CDPHE
Steve Tarlton, CDPHE
Edd Kray, CDPHE
Tim Rehder, EPA
Mark Aguilar, EPA
David Abelson, RFGLOG
Ken Korkia, RFCAB

Attachment

Additional Section-Specific Comments provided by the City of Broomfield for the 771 DOP dated October 31, 2000

1 Page 2, Table 1 771 Closure Project Facilities

775, the sewage lift station is identified as a Type 1 facility on the table This facility could be Type 2 facility because of the history associated with contaminated water being released from controlled areas within the 771 Building

2 Page 9, 2 1 Project Team Organization Structure

There appears to be a conflict when RCRA inspectors report to the Operations Manager and associated regulatory compliance activities are reported to the Operations Manager rather than the Compliance Manager

3 Page 10, Figure 2 771 Closure Project Organization

Why does the project require two D&D Project Managers?

4 Page 17, 3 1 2 Physical Interfaces

Define the interface between Building 771 personnel and Building 776 personnel when the tunnel is being remediated

5 Page 20, 4 3 Dismantlement Sets and Decommissioning Areas

Broomfield is concerned with the concept of having only Building Trades working in Areas with removable contamination less than 2,000 dpm without the support of Steelworkers, which have the process knowledge of the facility and known hazards associated with dismantlement of equipment Clarify the need to distinguish between a dismantlement work set and a decommissioning area All steps must be taken to protect the workers from potential situations that could lead to a plutonium uptake

6 Page 24, Table 4 Area Descriptions, Area AF

Clarify if the floors in rooms 114, 141, and 149 will be scabbled, or will they be removed in sections and packaged as low-level or transuranic waste? It may be impossible to decontaminate the floors in 141 and sections of the floors in rooms 114 and 149

7 Page 27, 4 4 2 Decontamination, ¶ 5

The document states "floor areas requiring the removal of contaminants exhibiting penetration of less than one inch will be mechanically scabbled to remove

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contamination" However, surface cracks in the floor slabs will be decontaminated with "crack chaser" scabbling equipment Please define the process of using crack chaser How will the airborne contamination be controlled?

8 Page 27, 4 4 2 Decontamination, ¶10

Asbestos-containing material (ACM) in the roofs will be removed prior to demolition, but there is no mention of radioactive contaminants in the roofs How will contaminated roofs be remediated? What controls are in place to ensure there are no releases to the environment?

9 Page 29, 4 4 4 Room 141, 2nd bullet

Change the sentence to read Removed floor sections will be surveyed and released *if the sections meet the free release criteria*

10 Page 29, 4 4 4 Room 141, 3rd bullet

ACM may be a factor to consider when removing the downspout for the stormsewer drain system and the riser section of the system which could disturb the roof

11 Page 29, 4 4 4 Room 141, 8th bullet

Contaminated concrete in 3 feet by 3 feet sections will be cracked prior to disposal Define how the concrete will be cracked Will the concrete be cracked in room 141? Will temporary HEPA ventilation/filtration be used? If temporary HEPA ventilation is used during this process, what procedure is in place to ensure the filters are changed out on a regular basis and do not become plugged?

Once the ceiling is removed a temporary ceiling cover will be installed What type of cover will be used and how will the integrity of the ceiling be measured?

12 Page 30, 4 4 4 Room 141, 1st bullet

See # 11, first statement

The document states concrete from the upper walls will be packaged as LLW, how is this determination made at this point without characterization of the room?

13 Page 30, 4 4 4 Room 141, 2nd bullet

Describe the process used when the contaminated floor is being removed and the controls that will be in place to prevent additional migration of contaminants to the soil What does the decision tree process reflect when soil is contaminated? Will the soil be remediated at this point and will the project chase the contamination in the soils? How deep will the contamination be chased?

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14 Page 30, 4 4 4 Room 141

What are the plans for controlling groundwater within this area? How and where will the heavy equipment used inside the room be decontaminated?

15 Page 30, 4 5 Environmental Restoration

The document states UBC will be remediated, but original process waste lines will be dispositioned when Individual Hazardous Substance Site (IHSS) 121 remediation occurs Foundation drains will also be addressed when IHSSs associated with the 771 Closure Project take place and the document does not address potential new water pathways that may be generated during the UBC remediation process Define the process if there are elevated levels of contamination around or in the process lines or foundation drains The DOP states "drains will be interrupted and backfilled or otherwise blocked to prevent a conduit to the drainage" Clarify if the drains are free-released or contaminated prior to backfilling or being blocked

16 Page 31, 4 5 1 Project Description

The DOP states source removal will remediate soils to the extent practicable At what point will all the source removal take place for soils above Tier 1? The second paragraph states, "groundwater contamination will not be addressed as part of this remedial action", but the City strongly believes groundwater management is a key component associated with the 771 UBC remedy The document does not identify any scenarios associated with the removal of UBC and encountering groundwater

17 Page 32, Table 5 Potential Contaminants of Concern and Clean-up Target Levels

Table 5 identifies five contaminants of concern (COC) and does not identify freon as a COC Freon was used routinely within the building Define how the COCs are identified for 771 to determine if adequate characterization is performed The Industrial Area (IA) Sampling and Analysis Plan (SAP) is generic to characterization within the IA and is not specific to Building 771 Is there a routine generic list of analytes to determine the presence or absence of contaminants during the first phase of sampling?

18 Page 32, 4 5 4 Project Approach, ¶2

The document states "contaminated soil and process waste lines associated with the UBC will be excavated and dispositioned, as appropriate" Define appropriate, does this mean stockpiled, packaged, or transported to a staging area? The document defines how process waste lines not associated with UBC will be grouted or foamed in place to eliminate potential pathways What is the long-term impact to Environmental Restoration (ER) when the grouted or foamed lines are removed? Will this be creating a Department of Transportation (DOT) issue or a waste issue?

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19 Page 32, 4 5 4 Project Approach, ¶ 2

The UBC project will be conducted in accordance with Site ER policies and procedures Define the procedures associated with UBC remediation

20 Page 33, 4 5 4 2 Proposed Action

The document states soil below the Tier 1 action levels will be stockpiled and returned to the excavation after soil remediation is complete If the soils contain *listed* volatile organics how can they be returned to the excavated area? Have the regulators made a decision to allow this action? Cite the regulatory section which allows for placement of Land Disposal Restricted (LDR) waste back into the original excavation

Will soils being returned to excavated areas be compacted? What procedures will be used to control placement of soils back into excavated areas?

21 Page 33, 4 5 4 3 Excavation, ¶ 1

To prevent the release of airborne contamination, contaminated soils and debris should always be placed directly into waste containers Stockpiling waste material also creates physical hazards and reduces the work area which could lend itself to increased accidents with all the heavy equipment and workers in the area

22 Page 33, 4 5 4 3 Excavation, ¶ 2

The 771 DOP addresses dust control, but does not identify having a person on-site that is Opacity Certified to ensure dust is being controlled The initial D&D documents identified having an Opacity Certified person on-site during D&D operations The 771 DOP needs to include the statement of having a certified person on-site to ensure and document dust is being controlled Fugitive dust control also minimizes the spread of contamination

23 Page 33, 4 5 4 3 Excavation, ¶ 4

The City of Broomfield disagrees "only surveys" are to be taken to verify the successful remediation of UBC Change the second sentence to read At the completion of excavation, samples and surveys will be taken along the base and sides of the excavation, to verify the completion of the remedial action

24 Page 33, 4 5 4 3 Excavation, ¶ 4

Table 5 is not inclusive of all COCs See # 17

25 Page 33, 4 5 4 3 Excavation, ¶ 5

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Why is the assumption made that most of the compounds have not migrated due to the compounds being insoluble in nature? Most organics are soluble and do migrate, thus making the scenario of contaminated media more complicated

26 Page 34, 4 5 4 3 Excavation, ¶ 3

If dewatering of the excavation is required, the water will be sampled and managed as per the Site's Incidental Water Program The 771 DOP should be more specific for water management issues Information is available regarding the plumes within the area and should be incorporated into the document What is the procedural process to ensure sumps are not cross-contaminated? Define the process for decontamination of the pumps and the disposition of the rinsate associated with the decontamination process

27 Page 34, 4 5 4 4 Staging of Excavated Soil

Describe the type of berm that will be utilized to contain water that may seep from wet soils How will the areas be sloped to collect the water?

28 Page 34, 4 5 4 4 Staging of Excavated Soil

Soils above Tier 2 levels but below Tier 1 levels will be appropriately managed and evaluated for return to the excavation based on what procedure? What are the criteria for the evaluation and are the regulators involved with the decision to return the soils to the excavation? The City of Broomfield is concerned the process for the evaluation is not clearly defined and we requests more dialogue with the stakeholders to address this subject Broomfield requests more information regarding the policies and procedures associated with this remediation activity

29 Page 35, 4 5 4 5 Completion of Remedial Action

For the equipment decontamination process, where will the equipment be decontaminated and how will the rinsate be dispositioned? The 771 DOP is a building specific operations plan and should include this information within the document

30 Page 35, 4 5 6 Waste Management, ¶ 1

See # 28 related to returning soils to excavated areas

31 4 6 Pre-Demolition Survey

The previous 771 DOP dated September 13, 2000 contained two crucial tables that were very informative and defined both outbuilding disposition summaries and pre-demolition summary survey criteria Broomfield requests the two tables be incorporated into the revised 771 DOP dated October 31, 2000 to reflect the 771 planning basis for facility demolition The information provided within these two

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tables is very extensive and does provide the level of detail stakeholders are requesting

32 Page 36, 4 6 Pre-Demolition Survey, ¶ 2

The Pre-Demolition Survey Plan (PDSP) is in draft form and currently is under-going review and approval by the regulators Explain the criteria of the plan that drives the PDS to satisfy the objectives of the PDS Table 6, the PDS Summary should be placed within this section of the document What are the regulators issues with the PDSP? Will the stakeholders be given the opportunity to review this plan?

33 Page 36, 4 6 Pre-Demolition Survey, ¶ 2

Data required to meet PDS objectives include total surface contamination measurements, removable surface contamination measurements, and scan data, yet surface media sampling will only be required on a limited basis Given the fact that concrete will be used as backfill, why is surface media sampling required on a limited basis? How is the decision made to determine how and when media sampling will occur? Identify the procedure or process related to the surface media sampling criteria

34 Page 36, 4 6 Pre-Demolition Survey, ¶ 5

The process of sampling non-radiological contaminants is not clearly described within this document Broomfield is worried that there is not a clear method to sample non-radiological contaminants and verify all the contaminants have been removed prior to demolition How are surveys performed for the verification process? How is beryllium measured or other contaminants during the RLC phase and PDS phase?

35 Page 36, 4 6 Pre-Demolition Survey, ¶ 5

The 771 DOP states in limited cases, non-radiological characterization may be required during the PDS phase For the 771/774 roofs, why can't characterization be performed during the RLC phase? This section of the DOP should address chemical constituents associated with RCRA regulated units PCBs should also be mentioned as a non-radiological contaminant, which is associated with the facility Based on information associated with the facility, the non-radiological contaminants should be identified within the document to reflect the scope of the project

36 Page 36, 4 6 Pre-Demolition Survey, ¶ 6

Table 6 is essential to this section of the DOP The table should be placed directly after this paragraph

37 Page 36, 4 6 Pre-Demolition Survey, ¶ 7

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The independent verification survey has to be performed on an established percentage survey criteria City personnel strongly feel the criteria has to be identified within a procedure to provide consistent verifications of buildings at the Site Usually verification protocols require 10% verification, not the "typically 5%" identified in the DOP The document needs to clarify the independent verification survey process to ensure independent verification contractors are performing the same quality of work

38 Page 37, 4 7 Facility Demolition

Add Table 5, Outbuilding Disposition Summary to this section of the document

39 Page 37, 4 7 1 1 Demolition Planning and Execution, ¶ 1

Change the following sentence to read During demolition, an Opacity Certified person will monitor airborne dust on a visual presence or absence criterion Dust control water spray will be applied as required from a fire hose equipped with a fog nozzle to control fugitive dust

40 Page 38, Figure 4 Demolition Activities and ER Interface

The figure needs to clarify the PDS for Building 774 will be conducted after remediation of the foundation and UBC has been completed

The DOP does not address the specific details for the removal of the underground storage tanks (USTs) Add a section to provide more details associated with the USTs and the demolition/disposal sequence within the document

41 Page 39, 4 7 1 3 Site Preparation

How will areas immediately adjacent to planned demolition activities be controlled? The document states ER will control the areas, but does not identify how they will be controlled ER's activities to control these areas are within the scope of this document because of the association with the 771 demolition activities and the potential to impact the environment

42 Page 40, 4 7 1 5 Demolition of Outbuildings, ¶ 2

A section needs to be added to the document to address USTs Did the two former diesel/fuel tanks go through closure? Will these tanks be left in place? What is the plan for remediation if the soil is contaminated in the area of the fuel tanks? What did the 3 USTs, beneath Building 716 contain? What plans or procedures are in place for the removal of these tanks and their final disposition?

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43 Page 40, 4 7 1 6, Demolition of Structures and Appurtenances Specific to Building 771 and Building 774

If soil is to be removed on the east, west, and south walls of Building 771 to an elevation approximately coincident with the second floor framing/slab, how will erosion controls measures be implemented to prevent vertical migration of water? The DOP states the objective of the soil removal and demolition is to leave the area in a safe configuration until the site is backfilled during site restoration The purpose of the 771 DOP is to recognize specific activities associated with decommissioning operations of 771 and their potential impact to human health and the environment

44 Page 43, 4 7 2 Demolition of the Stack

Broomfield emphasizes its' concern with the use of explosives at the Site Until we receive more information regarding the use of explosives at the Site, Broomfield will strongly object to any use of explosives during a demolition project The 771 DOP does offer more detail than any previous D&D document regarding explosives We do however have some additional questions

- Does any of the area in which the trench/soil berm is to be located, reside in an IHSS?
- Will the 15 feet wide by 5 feet deep trench meet OSHA shoring or sloping standards?
- Will the entire stack be surveyed and free-released prior to dropping the stack?
- Why will the berms be constructed of loose lifts of soil material instead of compacted material? With the dropping of the stack, loose material will generate more fugitive dust than compacted material

45 Page 44, 4 7 2 Demolition of the Stack, ¶1

Concrete rubble from the stack will be stockpiled at the 207C Pond area per the demolition stack plan Clarify if the area is within the actual pond footprint or along the pond area There is not much storage room around the 207C area

46 Page 44, 4 7 2 Demolition of the Stack, ¶ 2

After the stack has been removed, the subcontractor will be directed by ER to place erosion and run-on/off controls in place Will the trench be backfilled when the subcontractor is still on-site?

47 Page 44, 4 7 3 Demolition of the Tunnels

Broomfield requests the following information regarding the demolition of the 3 tunnels connected to Building 771 (1) what plans will be in place for the characterization and remediation of the soil around the tunnels, (2) Will groundwater be an issue during the decontamination of the tunnels or when it is necessary to

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remove contaminated sections of the tunnel, (3) what impact will a cast-in-place remedy have on the water balance for the site, and (4) what plans are in place for the demolition of the tunnels if they do no meet the free-release criteria?

48 Page 46, Table 6 Waste/Recyclable Material Estimated for the 771 Closure Project

The two "**" should be next to the LLMW –RCRA liquids, not the LLMW RCRA solids I think RCRA Unit 374 3 accepts liquids

49 Page 46, Table 6 Waste/Recyclable Material Estimated for the 771 Closure Project

For the non-Rad regulated section of the table, should you add RCRA liquids?

50 Page 46, 5 1 3 Wastewater

Broomfield questions the use of the two process waste tanks in Building 731 and/or the tanks in Building 732 as a flow-through device for RCRA regulated liquids and non-RCRA regulated liquids Building 731 has two "former RCRA 90-day tanks # 731-651 and 731-652 and the tank in Building 732 is an Interim Status Unit (40 16) and the regulatory issues have not been addressed in this section of the document Broomfield requests the following information (1) will the former RCRA tanks have to go through closure again if RCRA-regulated liquids pass through the tanks, (2) if the tanks do not have high level alarms, will someone physically inspect the tanks as the liquid is being transferred through the tanks, (3) if the secondary contaminant does not meet the criteria for regulated tanks, how can the tanks be used if they are required to be out-of-service, (4) define the proposed enhanced tank management requirements that will be required during the transfer of the waste and, (5) Broomfield would appreciate the opportunity to review and comment on the proposed requirements that will be identified in consultation with the Lead Regulatory Agency (LRA) before implementation The City provided the same comments on concerns regarding the same issues with the draft 707 DOP As of today, the City has not received any response to our comments relate to the 707 DOP and these issues

51 Page 47, 5 3 Management Requirement for Compliance Order Wastes

This section of the DOP contains information related to "Compliance Order Wastes" and provided specific information for idle equipment and mixed residues, but does not contain specific information for waste chemicals Please provide the following information for waste chemicals (1) inventory, (2) location, (3) inspection schedule and, (4) plans for disposition of the waste chemicals The information should be incorporated into the 771 DOP

52 Page 47, 5 3 1 Idle Equipment, 3rd bullet

Clarify if inspections of idle equipment are performed by waste inspectors or "RCRA-qualified" waste inspectors Broomfield is concerned waste inspectors are

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performing inspections of equipment that contain hazardous wastes or residuals of hazardous wastes

53 Page 48, Table 7 771 Closure Project Idle Equipment with Hazardous Materials Inventory

Explain how Tank 42, located in Building 774, Room 203 can be active and yet be on the idle equipment inventory Is the tank being used to store caustic material for the D&D activities in Building 771 and/or Building 774?

54 Page 49, Mixed Residues, ¶ 3

Describe the process for terminating the "Mixed Residue Compliance Order on Consent" when the DOP is approved What will happen to the controls and inspections that are in place for tanks when the DOP is approved? How will the Implementation Plan for Board Recommendation 94-1 be satisfied when the DOP is approved and tanks and ancillary pipes have not been decommissioned?

55 Page 49, Table 8 771 Closure Project Mixed Residue Units

Explain why some tanks in the table are listed as physically empty, inactive, or active

Modify columns to the table to reflect the associated EPA codes (if applicable) and the proposed closure method for each of the Mixed Residue Units Broomfield wants to remind DOE the intent of the 771 DOP is to identify the specific plans and activities associated with decommissioning and demolition of the 771 facility

56 Page 54, table 9 Material Recycling Options

The table suggests all radioactive mixed scrap material contaminated with hazardous constituents may be recycled under the exemption per §261 7 The §261 7 exemption only applies to containers, please clarify the recycle option

57 Page 55, 5 5 Waste Minimization and Recycling, ¶ 1

The City of Broomfield cannot support the proposed change to the RSOP for Recycling Concrete More information is required and the proposed process needs to be refined The concrete will not exceed twelve inches in thickness, but does not identify the length and width of the concrete The layered approach does not lend itself for ultimate subsidence for backfilled areas of less than one percent Layering of the concrete increase the potential for subsidence A layer of soil is to be placed on top of the concrete, but the DOP does not define the size of the lift (amount of soil) Define a" formal compaction effort" Define the compaction protocol and the verification method of compaction Will there be any QA/QC oversight of the compaction? Size reduction of the concrete is generally required so there will be no subsidence issues Have the proposed changes been addressed and discussed with the

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Water Balance Group? Please provide the requested information related to the proposed changes to the RSOP for Recycling to the stakeholders, so we may have our Engineers review the proposed changes and provide informative comments

58 Page 57, 6 Closure of RCRA-Regulated Units

The DOP is to serve as the RCRA permit modification for RCRA-regulated units within Buildings 771 and 774, yet does not identify the specific changes to the RCRA permit closure requirements The changes need to be clearly identified along with the explicit changes for each unit Table 10 and Appendix B identify the RCRA-regulated units, yet there are not units mentioned for Building 771 in Appendix B

Table 10 should be modified to reflect building number Appendix A (Unit-Specific Information sheets) should be modified to include regulated status (interim or permitted), boundaries, EPA codes, closure method, and waste disposition To be consistent with the other DOPS, amend Appendix B to provide the same information and format as the 707 DOP

59 Page 57, 6 1 1 1 Clean Closure, first bullet

If a spill occurred within a RCRA-regulated unit, a proposed closure method is to have "complete documentation" to demonstrate releases were adequately cleaned up per "visible residual inspections" "Complete documentation" has to be clarified Visible residual inspections are not adequate verification methods for chemical spills such as solvents Without final sampling verification, how can you verify the unit has been successfully decontaminated? To verify a unit has been "clean closed" the operator has to typically decontaminate the unit and sample the rinsate solution to verify the rinsate does not exceed the standard for constituents of concern How does this change impact the RCRA closure criteria for the debris rule which requires you to meet a standard? How will this proposed method impact the final pre-demolition survey? Broomfield expects the regulators will oppose such a proposal The City strongly opposes a closure method without any analytical verification method, especially with secondary containment systems Concrete may not be used as backfill if it is not free-released of chemical contaminants that may impact groundwater or surface water

60 Page 58, Table 10 RCRA-Regulated Units in the 771/774 Closure Project

Identify the specific EPA codes for unit 771 1 and 774 1

Why is the incinerator excluded from Table 10? The incinerator is a RCRA-regulated unit and is not mentioned at all within the 771 DOP Broomfield is adamant more details referring to the decommissioning and demolition of the incinerator should be indicated in the DOP to identify the project approach for the unit's decommissioning The units decommissioning is an essential part of the 771closure project Add the incinerator removal description to section 4 7, "Facility Demolition"

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61 Page 61, 6 1 4 Partial Closure

The ultimate disposition of piping embedded in the remaining slab, as well as piping located beneath the slab, will occur during ER activities per the DOP Will ER be responsible for the RCRA closure? Broomfield is concerned there may be a potential for RCRA-regulated materials to be left in place without ER's knowledge and mixed waste may be remediated with radioactive waste and the waste will not be dispositioned properly Identify the procedures ER have in place to manage remediation waste?

62 Page 61, 6 2 1 General Methodology for Glovebox Disassembly

See comment # 59 regarding closure by visual inspection

63 Page 62, 6 2 1 General Methodology for Glovebox Disassembly

Describe how the presence of hazardous constituents will be identified in a glovebox?

64 Page 62, 6,2,1 General Methodology for Glovebox Disassembly, ¶ 1, 3rd bullet

The DOP states the "Clean debris surface" standard will be used to determine if a glovebox is deemed to be non-hazardous To utilize the debris rule, the generator is required to decontaminate *prior* to characterizing the media as non-hazardous

65 Page 62, 6,2,1 General Methodology for Glovebox Disassembly, ¶ 3, 5th bullet

Per section 268 of the Colorado Hazardous Waste Regulation (CHWR), the DOP states the glovebox will be LDR compliant following encapsulation Does encapsulation meet LDR requirements for F-listed wastes and their underlying constituents?

66 Page 62, 6,2,1 General Methodology for Glovebox Disassembly, ¶ 3, 8th bullet

Spray fixative equipment may be left in the glovebox after encapsulation and the glovebox will be removed as waste Define the specific spray equipment and any requirements such as the equipment and/or containers have to be empty Under no circumstances shall any liquids be left inside the glovebox, which is deemed a solid waste

67 Page 63, 6 2 2 1 General Methodology for RCRA-Regulated Tanks Disassembly, ¶ 2

The document states if a blockage is encountered that cannot be cleared readily during the tap and drain process, additional taps will be installed to minimize the length of the blocked section The blocked section will be removed with "provisions to contain trapped liquids that may be present These sections will be size reduced in a manner that accommodates the possibility that trapped liquids may be released to

containment" Define the provisions of the activities and describe how the worker's safety is an integral part of the activity How are pipes with contained liquids transferred to controlled tented areas? What is the process for pipe removal if there is severe blockage from sludge or material causing blockage? Broomfield understands this is a dynamic activity, but workers have to have procedures in place to know when to terminate jobs and request assistance from supervision and Health and Safety Hold points need to be clearly identified with workers when disassemblies of tanks or pipes occur

68 Page 64, 6 2 2 1 Piping Removal, 2nd bullet

For removal of pipes with no residual liquids or sludge, the DOP states the pipes section will be taken to the size reduction facility at an appropriate time Waste waiting disposition, should never be left in a work area. There is an increased potential for the release of airborne contamination when radioactive debris is being stored within a work area and not properly packaged Building 771 needs to identify a staging area for removed waste and the area has to be adequately monitored for airborne contamination

69 Page 64, 6 2 2 1 Piping Removal, 7th bullet

The DOP does not adequately define the process for management of liquid waste during the 771 D&D project Remaining liquids or sludges will be drained and placed into containers, but there is no mention of compatibility or segregation of EPA waste codes The final step for liquid disposition is immobilization after sampling What is the protocol for sampling? Reference the Sampling and Analysis (SAP) for this process and cite the regulation allowing to treat waste if it is RCRA-regulated

70 Page 64, 6 2 2 1 Piping Removal, last paragraph

Change the following sentence to read "Each IWCP work package, which will be prepared prior to the start of closure activities, will include more specific and detailed instructions for the sequence of piping removal steps, removal and size reduction methodology, characterization process and hold points, and removal of residual material from pipe sections

71 Page 65, 6 2 2 3 Pencil Tank Removal, 5th bullet

Sections of tanks will be placed on open ends into drip pans to drain residual liquid or sludge Identify the procedure and process for segregation of waste to ensure wastes are compatible Clarify the size of pan to be used and the type of material to be used for the pans

16

72 Page 65, 6 2 2 3 Pencil Tank Removal, 6th bullet

Incidental liquids will be immobilized with absorbent or collected in Kim-wipes as wet combustibles Collecting incidental liquids may be generated a hazard if the liquids are oxidizers which were used in Building 771

73 Page 65, 6 2 2 4 Annular Tank Removal, 6th bullet

See # 71 and # 72 for liquid management concerns

74 Page 66, 6 2 2 5 Raschig Ring Tanks Removal

If raschig ring tanks are not inspected visually, how will the tanks be inspected by real time radiography (RTR)? Will tanks be shipped on-site to a RTR unit? What procedure is in place to ship tanks with potential liquids on-site without proper packaging? The City would like clarification for RTR process of raschig ring tanks The DOP states if tanks fail RTR, they will be returned to Building 771 or 774 to have the raschig rings removed Categorize the additional steps and activities that will be required to ship the tank which contains liquid, which could be RCRA-regulated, back to the 771 or 774 building

75 Page 66, 6 2 2 5 Raschig Ring Tank Removal, 6th bullet

Explain how non-mobile is removed from raschig ring tanks using mechanical means If the sludge is solid why does it have to be removed from the tank?

76 Page 66, 6 2 2 5 Raschig Ring Tank Removal, 7th bullet

See # 72 regarding the use of Kim-wipes as an absorbent

77 Page 67, 6 2 2 7 General Conditions for Tank Sections and Residual Materials

Change the following sentence to read Each IWCP work package, which will be prepared prior to the start of tank removal activities, will include more specific and detailed instruction for the sequence and methodology of tank removal, size reduction, waste characterization and hold points, and separation of residual material from tanks sections

78 Page 68, Professional Engineer Certification

If the Engineer is to certify closure of units based on decontamination, how will the engineer certify closure of a unit based on section 6 1 1 1? To ensure each RCRA-regulated unit has properly gone through the *clean closure process*, the "Certified Engineer" should be required to certify closure of each unit, not closure of the facility Have the regulators bought into this closure process?

17

79 Page 69, 7 1 1 Chemical-Specific requirements and Considerations

Applicable or Relevant and Appropriate Requirements (ARARs) for UBC not only include NESHAPS pollutants for radionuclides, but the potential for volatile organic emissions from UBC or intrusion into contaminated groundwater may also include other NESHAPs pollutants Again, this document should be site specific to identified activities and the organics should be identified not only to meet the ARAR requirement, but also to identify contaminants in the groundwater that may impact surface water

Fugitive dust is also an air pollutant that should be addressed in the ARAR section

Broomfield continues to have justified concerns with the methodology of air sampling during the demolition process of any facility at the Site We understand other monitoring methods are being investigated to determine how enhanced monitoring may be performed during D&D activities The City wants to reiterate the current air monitoring requirements are not sufficient to ensure the public or the environment is protected

80 Page 70, 7 1 2 2 Remediation Waste

Per §261 10, the definition of remediation waste is defined in the DOP This section of the regulation defines remediation wastes that are managed for the purpose of implementing corrective action This section of the regulation does not imply that remediation waste can be placed back into the excavated area if the waste is "F" listed Is there written concurrence that "F" listed waste does not have to meet LDR criteria?

81 Page 70, 7 1 2 4 Volatile Organic Compound and Particulate Emission Controls, ¶ 1

Volatile organic compound (VOCs) controls will not be in place during the removal and transport of soils contaminated with VOCs because there is an anticipated low concentration of VOCs How was this basis derived? If it is determined during the characterization or remediation activities VOC controls should be implemented, what procedure defines the criteria for the controls and at what levels are the controls activated? Broomfield requests the basis for this decision and does not feel the controls will be adequate if they are placed within an IWCP

82 Page 70, 7 1 2 4 Volatile Organic Compound and Particulate Emission Controls, ¶ 2

Regulation 7 is identified as the driver for transfer of liquid VOCs to a tank, container, or vehicle compartment with a capacity exceeding 56 gallons The regulation for the storage of waste containing VOCs should also be cited with the associated criteria

83 Page 71, 8 Environmental Consequences

18

The NEPA impacts for the 771 Decommissioning Operations Plan should be in the 771 DOP, not just the impacts from the UBC The RSOP for Facility Component Removal, Size Reduction, and Decontamination Activities and the RSOP for Facility Disposition included generic impacts for the Site In the spirit of NEPA, the DOP should identify the NEPA impacts for 771 that address specific contaminants

84 Page 71, 8 1 Geology and Soils

See # 28 pertaining to placement of soils back into excavations

85 Page 71, 8 2 Air Quality, ¶ 1

Industrial hygiene (IH) monitoring will be used as necessary to determine if air emissions are a concern for workers Modify the document to reflect how IH will perform monitoring for organics

86 86 Page 71, 8 2 Air Quality, ¶ 2

The DOP suggests if a monitoring limit is exceeded, "operations will be stopped, the reason for the release will be determined, and actions will be taken to prevent further releases" Broomfield understands it takes weeks or months to receive air monitoring results and this process is unacceptable A demolition job could be completed before the results are received The current air monitoring process does not protect the environment or the public in a manner that could prevent on-going releases during the period of an exceedance

87 Page 72, 8 3 Water Quality

Broomfield is concerned water quality management is not being addressed in this document Broomfield has addressed the same concerns with the other D&D documents and does not feel assured surface water will be protected adequately Contaminated groundwater can degrade surface water and the document needs to identify specific controls to prevent the release of source contamination The DOP only addresses UBC remediation and its' impact Broomfield wants the DOP to identify water management controls for the project and the potential adverse impacts and how they will be mitigated

88 Page 73, 8 10 Cumulative Effects

Does the section related to cumulative effects identify waste to be generated from the UBC remediation, 771 project remediation, or for the site?

89 Page 74, Mitigation Measures

The exterior building walls will remain intact throughout the excavation of the UBC to mitigate negative impacts to personnel safety and the environment What controls will be in place when contaminated sections of exterior walls are removed prior to UBC remediation? Define the process for enhanced controls

90 Page 81, 12 Glossary of Terms

The glossary of terms should include terms used in this document A system should not be implemented to have to refer to several documents to use a specific document It is not feasible to expect a person to have all procedures and documents, therefore creating a system of documents that will not be used

91 Appendix A

The Appendix does not include any unit-specific information sheets from Building 771

Change the Appendix to reflect vital information pertaining to each RCRA-regulated unit See # 55 and # 58

92 Appendix B

Appendix B has drawings of 774 RCRA-units, but does not have drawings of 771 RCRA-units Add 771 drawings to the appendix

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